

# High-Speed Rail for California

Presentation CHSRA Board Meeting



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German Federal Ministry of Transport

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Siemens AG, DB Mobility Logistics AG

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Sacramento, CA

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12-03-2009

# Agenda

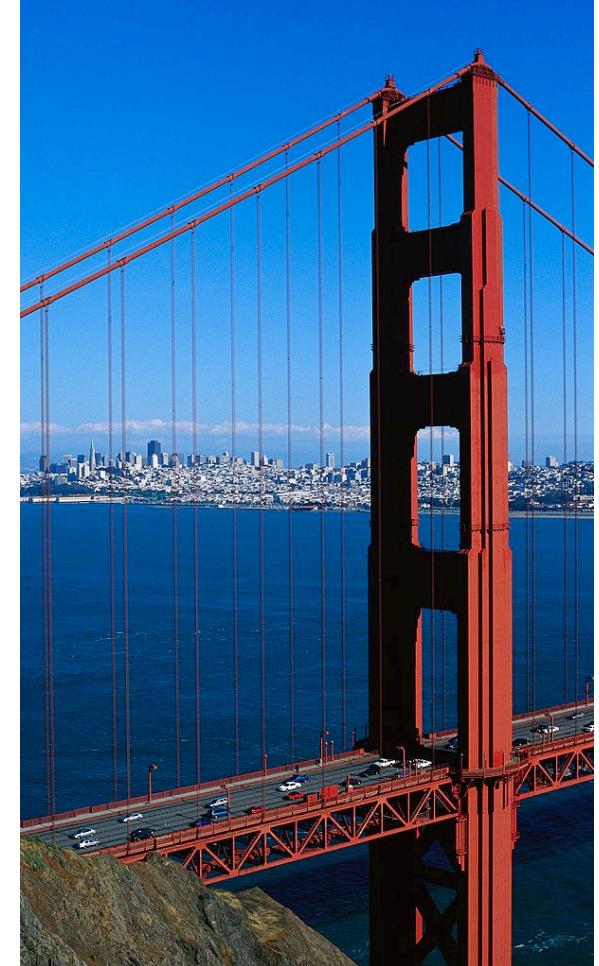
**Germany's Competence in High Speed Rail**

**High Speed Rail – The German Experience**

**Lessons Learned and International Experience**

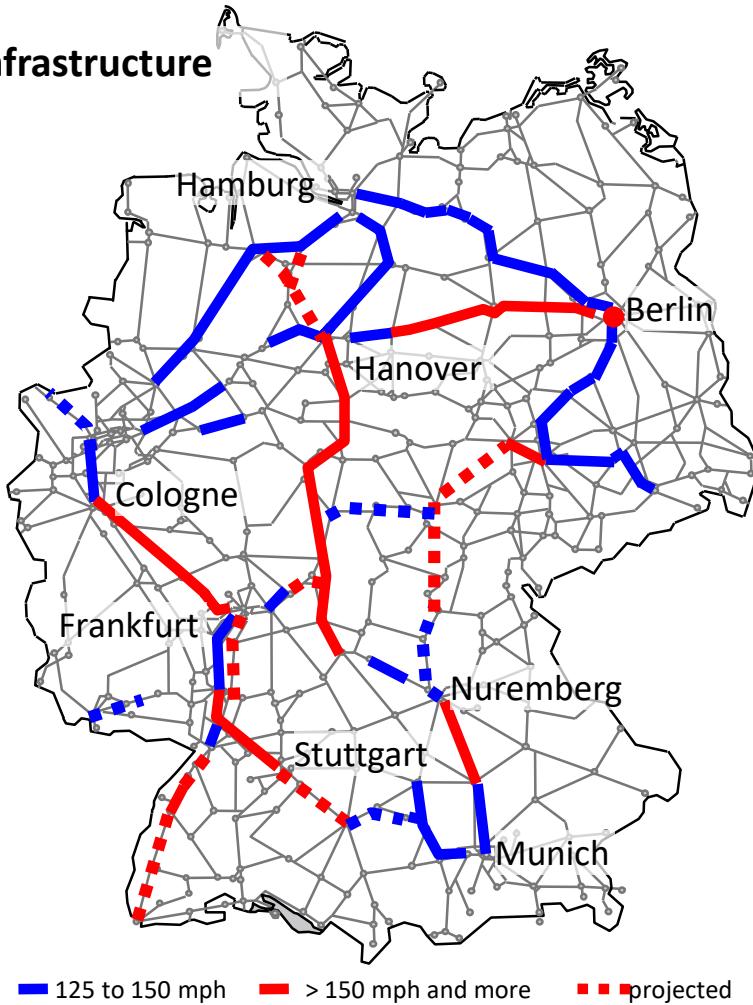
**Importance of being local - We are a USA Team**

**Our Recommendations and our Commitment**



# Germany's HSR infrastructure has grown continuously – Completion by 2025

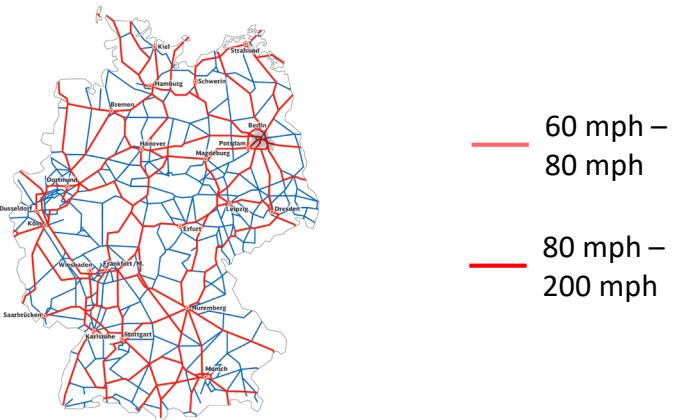
## HSR-Infrastructure



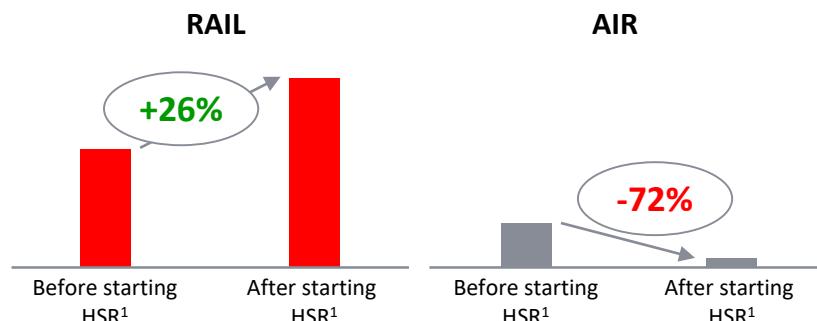
- **1991:** Launching first **High Speed** service **Hamburg – Munich** on new and upgraded lines
- **Continuous development** of HSR network – 2003 major **milestone:** travel time reduction on **Frankfurt - Cologne by 50%**
- Currently HSR provides **50% of long distance services** – **60% in 2020**
- By **2025 Completion of the German HSR infrastructure (approx. 3000 miles)**

# The German rail network is one of the largest in Europe and one of the most modern worldwide

## Rail network in Germany



## Modal shift Frankfurt - Cologne



<sup>1)</sup> Start HSR Cologne – Frankfurt am Main in 2003, passenger figures

- Germany's HSR connects many regional centers through a **dense network with regional feeder systems**
- **The passenger rail market in Germany is fully deregulated** since 1994 – free market access for more than 50 operators
- Average Market share of **Rail based long distance traffic is over 11%**
- In some **HSR lines market share exceeds 50%** (i.e. **Frankfurt – Cologne**)

# HSR in Germany is based on an excellent collaboration between the Government and Industry



Bundesministerium  
für Verkehr, Bau  
und Stadtentwicklung



- Since '94 fully deregulated passenger & freight transport market
- **144,000** miles road network
- **21,000** miles main line rail
- **163** million flight passengers
- **73%** of population in cities
- **600** cars per 1000 inhabitants

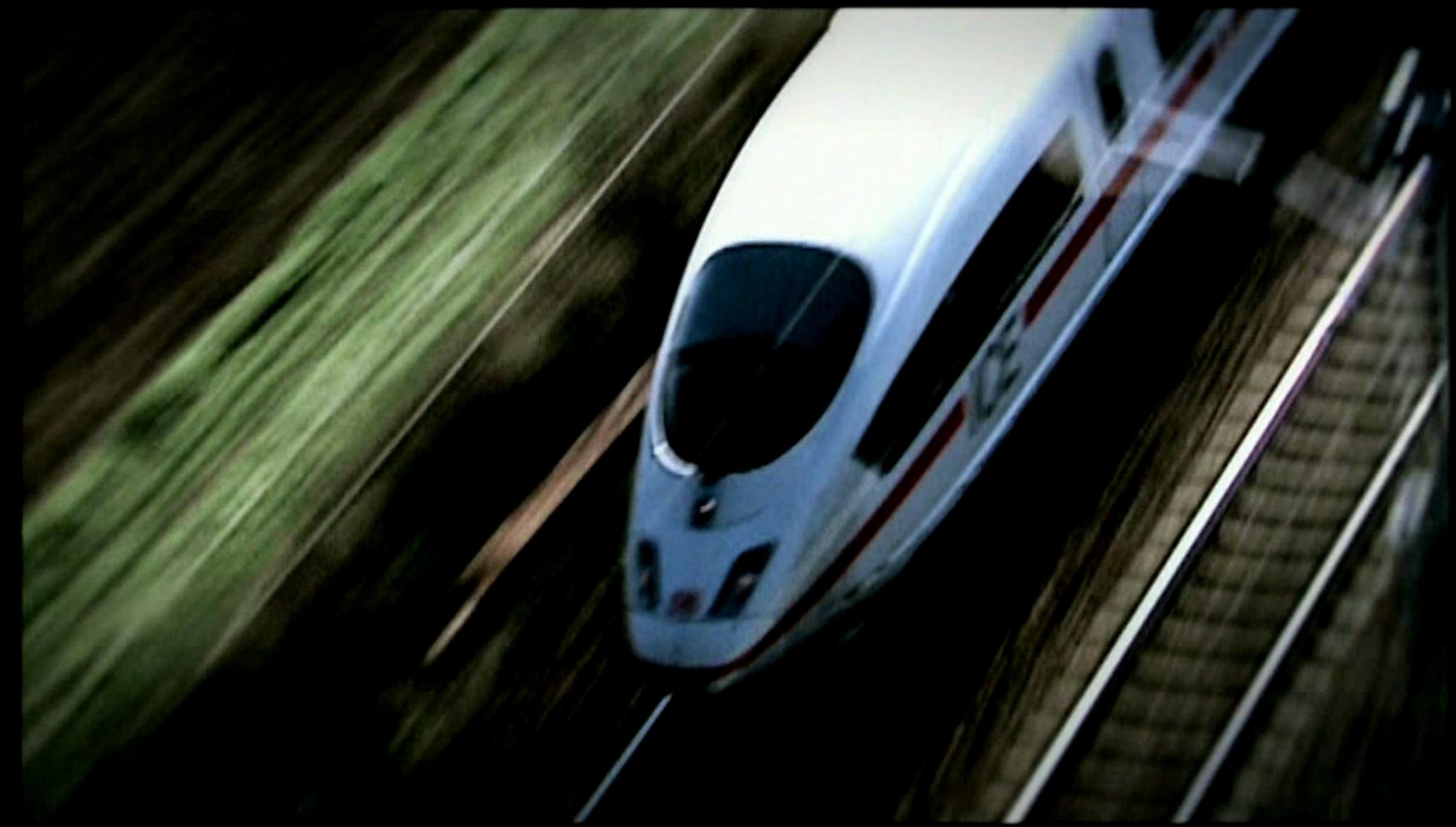


- Active in **3** sectors: Industry, Energy, Healthcare
- **\$110"0** revenue (**USA: \$ 22"0**)
- **420,000** employees in 190 countries (**USA: 70,000**)
- **165** years in business, **25** years production in California
- **No.1 Sustainability Portfolio**
- **High Speed Rail** in Germany, Russia, Spain and China



- **Integrated provider** of infrastructure and operation
- **\$ 47"0** revenue (**USA: \$ 3"0**)
- **240,000** employees (**USA: 6,000**)
- **27,000** passenger trains per day and **5,400** freight trains per day
- **Logistic forwarder** in USA since 1947

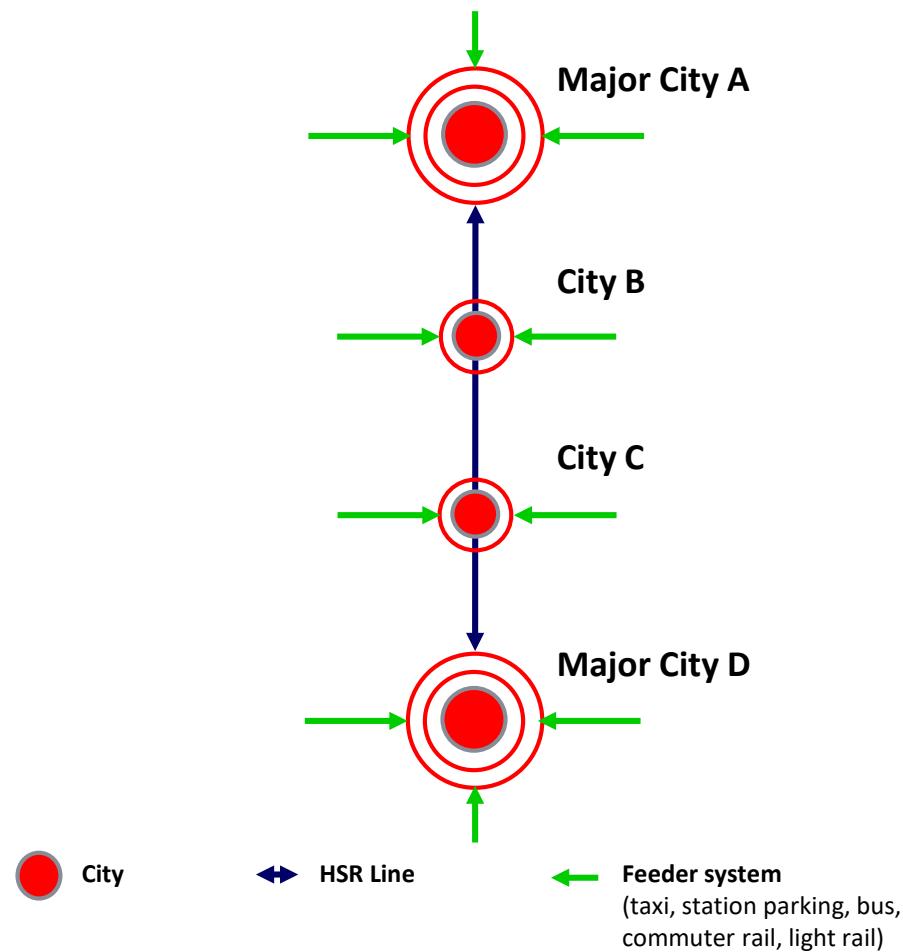
All data as of year 2008





# HSR is the backbone of a passenger rail system – regions get access to HSR by attractive feeder systems

## HSR feeder system

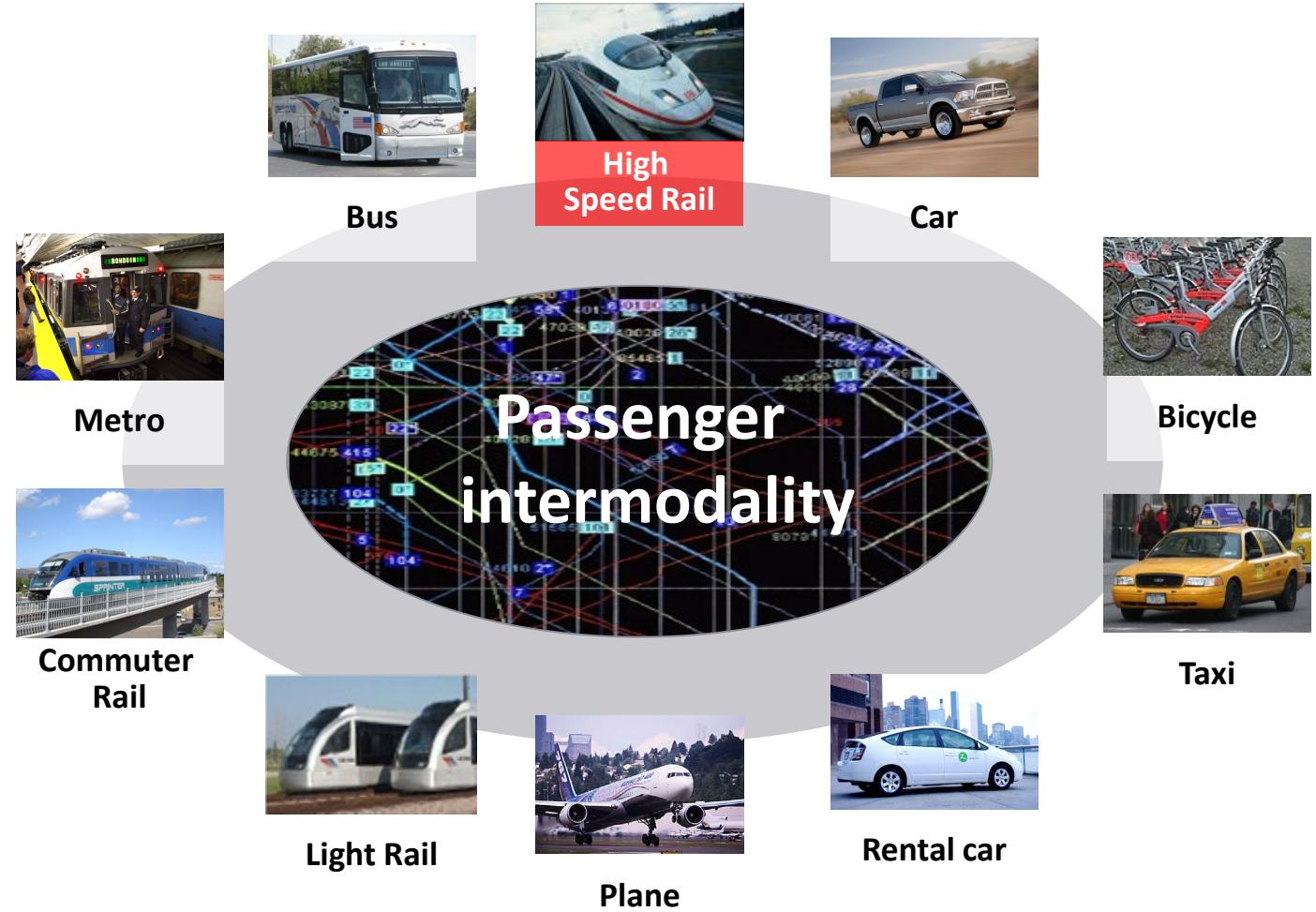


- **HSR is the backbone of public transportation systems**
- **Different modes of transport facilitate region wide access to HSR and secure the capacity utilization**
- **Connectivity between all different modes of transport** has to be ensured (station parking, taxi, bus, light rail, commuter rail etc.)
- **HSR connects and increases the value** of entire regions and strengthens the competitiveness



# Passenger Intermodality is the key for a HSR network

- Interchange stations to link with feeder systems
- Direct connection of airline hubs by rail
- Park & rail facilities for commuters
- Car rental / car sharing at station
- New ticket systems, e.g. integrated city transit & HSR tickets



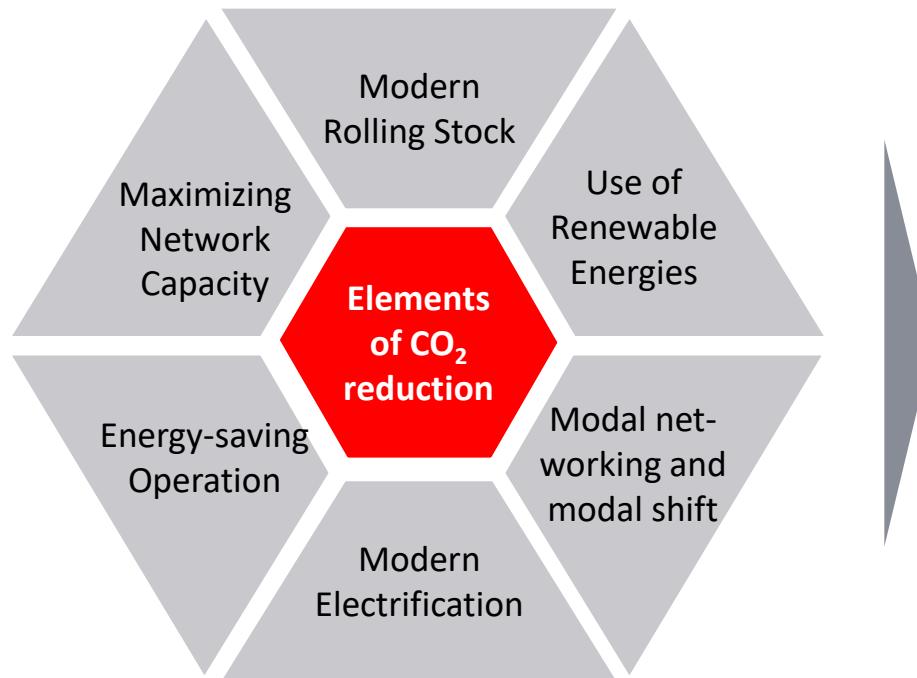
# HSR supports successful regional development... and results in strong economic growth



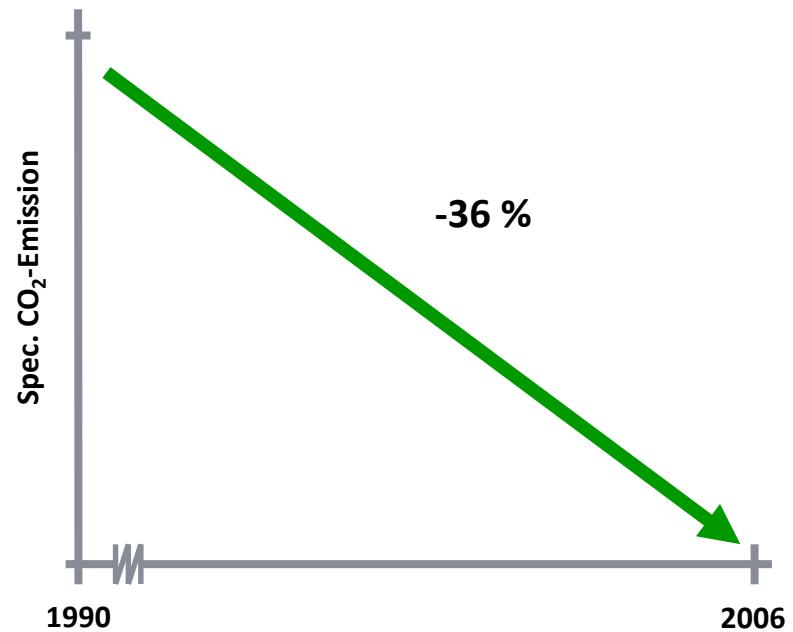
- **Land value increases** significantly in cities with HSR access
- **Commercial and industrial estate developments** around HSR stations result in jobs and fiscal revenues
- HSR gives impulses for **touristic development** and provides **high-capacity transport** for events

# HSR is climate-friendly and reduces energy demand and CO<sub>2</sub> emissions

## Our protection program 2020 for reducing energy consumption CO<sub>2</sub> emissions



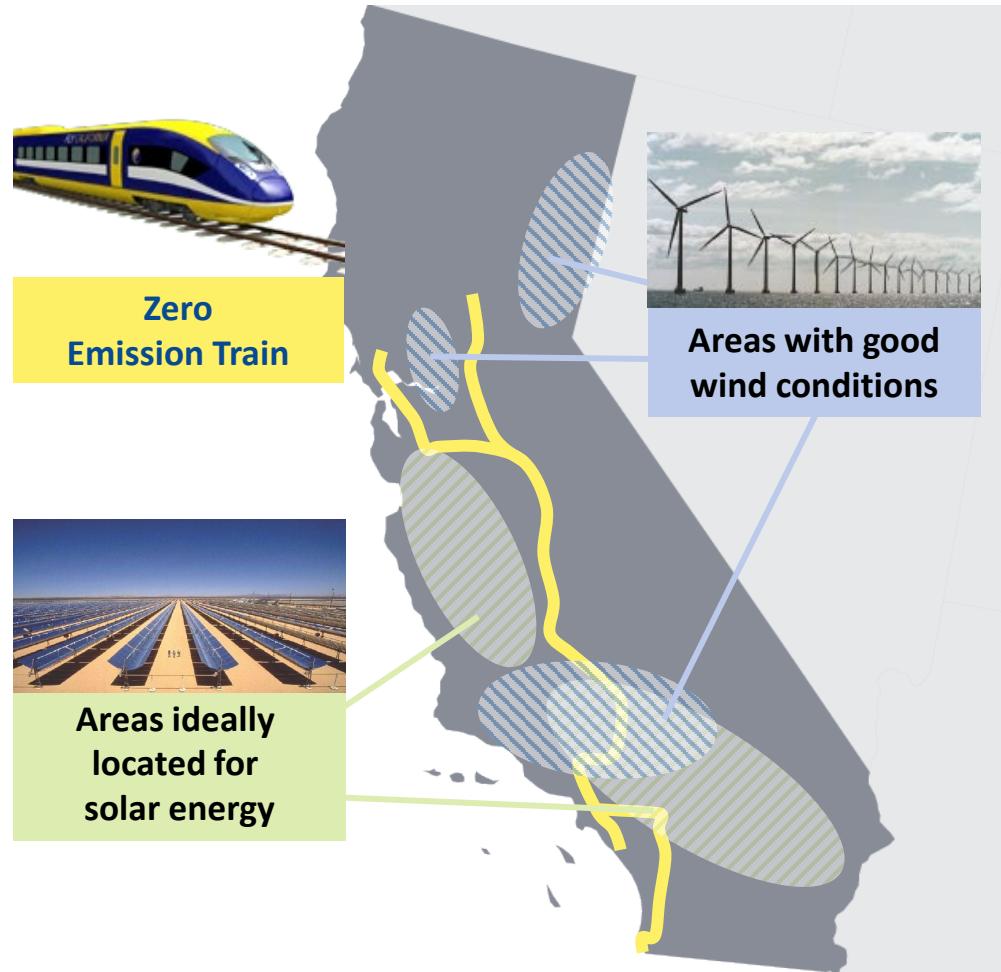
## Specific CO<sub>2</sub> reduction of DB AG (1990 - 2006)



New climate protection goal for 2020 (all DB Group activities) is -20 percent compared to 2006

# Solar and wind power can run the CA High Speed Rail System and reduces energy consumption

- German Partners have an extensive **experience in reducing CO<sub>2</sub> and energy consumption**
- California's goal<sup>1)</sup> to reduce **CO<sub>2</sub> emissions** are as ambitious as in Germany
- Energy supply for the CA HSR System from a combination of **solar and wind power**
- Solar and wind power **reduces the dependency on foreign energy sources**



<sup>1)</sup> California's goal of 20% of power generation through Zero Emission technology by 2020 Germany: CO<sub>2</sub> reduction target of 25% by 2020

# Our expertise in technology transfer and international experience

- German industry has helped many countries to **design, build and implement** rail systems
- **DB** is the **No.1 European Rail Network Operator** with extensive international experience working with local operators
- Siemens won **5 of the latest 8 international** orders and has vast experience transferring **proven technology**, adapting to local requirements
- ... but all business is local:  
**Localized production, maintenance and service delivery** to create jobs and to be where the customers are.



## International High Speed Trains



China



Russia



Spain

## International Operations Know-How



## Local Commitment in California



Sacramento Factory



# We are a USA Team with a strong base in Sacramento and a commitment to California

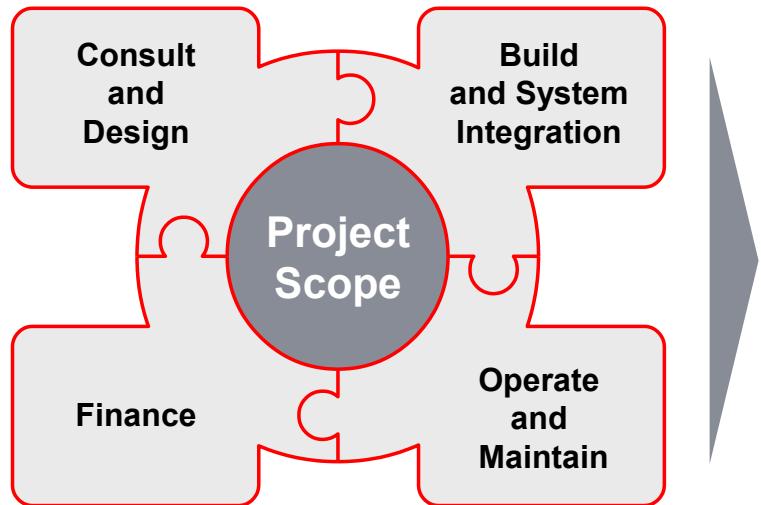
- Siemens USA has 70,000 employees, **5,400 in California** (1,000 in Sacramento)
- Siemens is a local manufacturer of rail vehicles with a **25-year history in CA**
- DB brings in a vast international operator's experience to **set-up a California high speed rail network**
- DB (Schenker) employs over **6,000 people** in the USA (HQ in Irvine)
- We are **part of the California society**



Together we are forming a team with local operators and U.S. civil partners

# We are a reliable and flexible Partner for California

## Project Scope



## Expertise

- High Speed Rail Operator
- Regional and Metro Operator
- Network Operator
- Engineering and Consulting



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- Rolling Stock
- Signaling and Electrification
- Local Manufacturing in California
- Turnkey Expertise incl. PPP

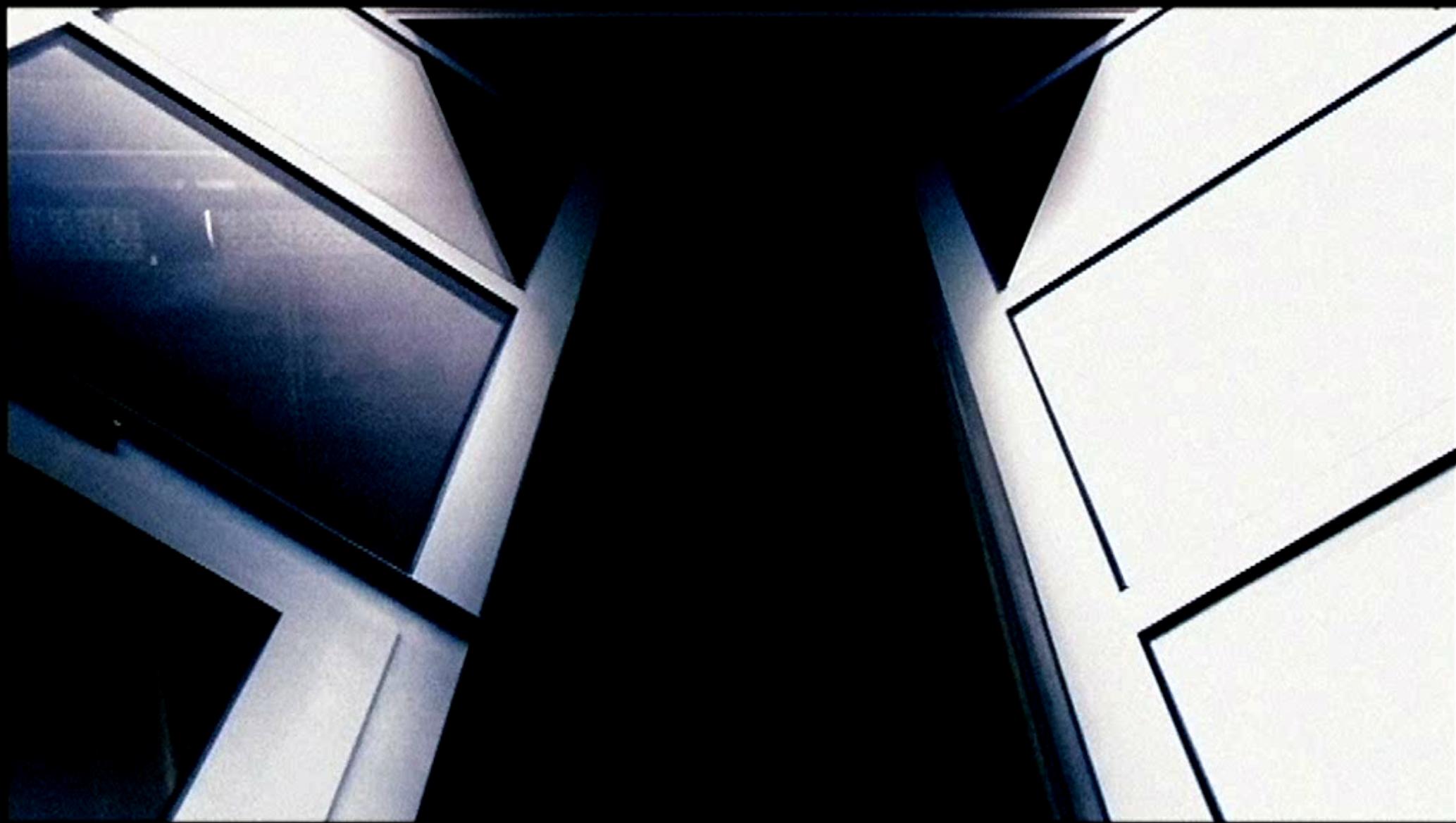
"Best fit" and flexible Partnering for California Project possible

# Our recommendations for High Speed Rail California

## Our experience can be transferred to HSR California

- Decide on a "best-fit" project model and structure
- Start with a system that guarantees sufficient ridership to ensure early success
- Continue with a step by step expansion plan to reach an integrated intermodal system
- Engage industry partners early to ensure experience and technology transfer







# We are committed to supporting California on its way towards a leading position in High Speed Rail



## We give our Commitment ...

- ... to form a strong USA High Speed Rail Team
- ... to transfer innovative High Speed Rail Technology
- ... to bring in our Operations and Service Know-How
- ... to create sustainable and environmentally friendly solutions
- ... to generate CA Jobs and to live Social Responsibility